Claims:

1. A process for purifying VWF, characterized by carrying out at least one hydroxylapatite flow chromatography.

2. The process for purifying VWF, characterized in that
   (i) a composition containing VWF and one or more contaminating proteins is contacted with a hydroxylapatite matrix so as to bind at least one contaminating protein to the hydroxylapatite matrix, while VWF is substantially not bound to the hydroxylapatite matrix, and optionally
   (ii) unbound VWF is separated from the hydroxylapatite matrix.

3. The process according to claim 1 or 2, characterized in that VWF is found in the flow and at least one contaminating protein is bound to hydroxylapatite.

4. The process according to any of claims 1 to 3, characterized in that the contaminating protein is fibronectin or fibrinogen.

5. The process according to any of claims 1 to 4, characterized in that hydroxylapatite chromatography is carried out at a pH of 6.5 to 8.0, preferably 6.8 to 7.5.

6. The process according to any of claims 1 to 5, characterized in that a solution containing sodium phosphate and/or potassium phosphate is used as the running buffer.

7. The process according to claims 1 to 6, characterized in that VWF is bound to a hydroxylapatite matrix in another chromatographic step and then eluted.

8. The process according to claim 7, characterized in that in another chromatographic step
   (a) VWF is bound to the hydroxylapatite matrix,

(b) impurities are washed out, and

(c) the VWF containing fraction of interest is then eluted at a higher salt concentration.

9. The process according to claim 8, characterized in that in step (a) a composition containing VWF, one or more contaminating proteins and 1 to 200 mM, preferably 1 to 50 mM, sodium and/or potassium phosphate, is contacted with the hydroxylapatite matrix.

10. The process according to claim 8 or 9, characterized in that in step (b) the hydroxylapatite matrix is washed with a buffer containing 100 to 300 mM, preferably 150 to 250 mM, sodium and/or potassium phosphate.

11. The process according to any of claims 8 to 10, characterized in that in step (c) the VWF containing fraction of interest is eluted with a buffer containing 200 to 500 mM, preferably 250 to 400 mM, sodium and/or potassium phosphate.

12. The process according to any of claims 7 to 11, characterized in that hydroxylapatite chromatography is carried out at a pH of 5 to 7.5, preferably 5.5 to below 6.8.

13. The process according to any of claims 1 to 12, characterized in that flow chromatography with hydroxylapatite is initially carried out, VWF not binding to the hydroxylapatite matrix, and then the flow fraction is re-chromatographed under binding conditions and the VWF fraction is eluted.

14. The process according to any of claims 1 to 13, characterized in that a previously purified plasma fraction is used as the starting material.

15. The process according to any of claims 1 to 14, characterized in that another purified cryoprecipitate solution is used as the starting material.

16. The process according to any of claims 1 to 15, characterized in that a cryoprecipitate solution precipitated with aluminum hydroxide is used as the starting material.

17. The process according to any of claims 1 to 16, characterized in that a chromatographically pre-purified cryoprecipitate solution precipitated with aluminum hydroxide is used as the starting material.

18. The process according to any of claims 1 to 17, characterized in that a pH precipitation is carried out prior to the hydroxylapatite chromatography to separate fibronectin.

19. The process according to any of claims 1 to 18, characterized in that a VWF containing protein solution from cell culture supernatants is used as the starting material.

20. The process according to any of claims 1 to 19, characterized in that hydroxylapatite is used which contains fluoride ions.

21. Use of hydroxylapatite for purifying VWF.

22. VWF containing composition obtainable by a process according to any of claims 1 to 20.

23. A composition according to claim 22, characterized in that it is a purified VWF preparation.